

### Claims

1. Hydraulic control system for a mobile equipment,  
5 comprising a shovel retained on a boom which is adapted to be pivoted by means of a boom cylinder, which may be pivoted by means of a shovel cylinder adapted to be controlled by means of a shovel control unit, wherein the shovel position may be fed back via  
10 a transmitting member to an orientation control device whereby the shovel cylinder may be controlled, and wherein the orientation control device comprises an actuation head in operative connection with the transmitting member, the position change of said  
15 actuation head during a pivoting movement of the shovel being convertible via a control device into a control signal for keeping the shovel in a target angular position, characterized in that a basic position of the actuation head is variable, and in  
20 that the transmitting member is connected with the actuation head such that both downward pivoting of the shovel and upward pivoting of the shovel from its target angular position results in a positional change of the actuation head, so that depending on  
25 this positional change a control signal for returning the shovel into its target angular position at the shovel cylinder may be emitted, and also the actuation head may be reset in the direction of its pre-set basic position.
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2. The control system in accordance with claim 1, wherein the actuation head is a control lever of a pilot control device, the electric or hydraulic control signals of which are supplied to the shovel  
35 control unit.

3. The control system in accordance with claim 2,  
wherein the pilot control device comprises two  
hydraulic pilot control elements whose control ports  
5 are connected via signal lines to control ports of  
the shovel control unit.
4. The control system in accordance with claim 3,  
wherein the shovel control unit comprises a shovel  
10 pilot control device, the control ports of which are  
connected via control lines to control chambers of a  
shovel proportional valve, the signal lines being  
connected via shuttle valves with the control lines,  
so that the higher one of the control pressures in  
15 the control chambers prevails.
5. The control system in accordance with any one of the  
preceding claims 2 to 4, wherein the control lever is  
connected via a spring assembly with the transmitting  
20 member and via another, oppositely acting tensile  
spring assembly with an actuation lever whereby the  
target position of the control lever may be adjusted.
6. The control system in accordance with any one of  
25 claims 2 to 4, wherein the control lever is connected  
via a lever mechanism with the transmitting member  
and an actuation lever for adjusting the target  
position, the lever mechanism being realized such  
30 that a target pivotal position of the control lever  
may be adjusted through the intermediary of the  
actuation lever, and the control lever may be  
adjusted when the shovel has been moved from its  
target angular position.

7. The control system in accordance with claim 5 or 6,  
wherein the end portion of the transmitting member  
linked to the spring assembly or to the lever  
mechanism, respectively, is mounted on a frame of the  
5 equipment by means of a movable bearing.
8. The control system in accordance with any one of  
claims 3 to 7, wherein a pressure port of the pilot  
control device is adapted to be connected with a  
10 control oil pump or a tank via a switching valve.